

Notice of Allowability

Application No.

10/084,914

Examiner

Scott A. Rogers

Applicant(s)

NABESHIMA ET AL.

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

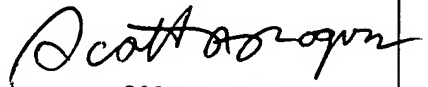
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 5/1/02
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


SCOTT ROGERS
PRIMARY EXAMINER

Examiner's Amendment

The application has been amended as follows:

In the title, after "METHOD", inserted ---WITH JUDGING PIXELS IN HALFTONE-DOT AREAS BASED ON ISOLATED PIXEL COUNTS---.

Examiner's Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

Referring to claims 1-7, the prior art searched and of record neither anticipates nor suggests in the claimed combinations, judging whether a target pixel is an isolated pixel in a halftone-dot area whose dot size is within a first range or a second range, counting the number of isolated pixels so judged, and judging whether the target pixel is in a halftone-dot area by comparing the counted number of isolated pixels with a predetermined threshold.

Referring to claim 8, the prior art searched and of record neither anticipates nor suggests in the claimed combinations, judging whether a target pixel is an isolated pixel by using a detection filter with a first size, or a second size that is larger than the first size, counting a number of isolated pixels in a predetermined area, and judging whether the target pixel is in a halftone-dot area by comparing the count number of isolated pixels with a predetermined threshold.

Referring to claims 9-13, the prior art searched and of record neither anticipates nor suggests in the claimed combinations, a first isolated pixel counter for counting a number of isolated pixels in a first area and a second

isolated pixel counter for counting a number of isolated pixels in a second area that is smaller than the first area, and a halftone-dot area judgment unit for judging whether a target pixel is in a halftone-dot area by comparing the number of isolated pixels counted by the second isolated pixel counter with a first threshold, in a first case where the number of isolated pixels counted by the first isolated pixel is within a predetermined range, and judging whether the target pixel is in a halftone-dot area by comparing the number of isolated pixels counted by the first isolated pixel counter with a second threshold, in a second case that is other than the first case.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Cited Art

The art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hanyu (US 5995658 A) discloses detection of graphic or photographic image areas comprised of a large number of lines by detected and counting isolated dots within an area of a predetermined size. Then, the number of isolated dots is compared with a threshold value and if the number of isolated dots is no smaller than the threshold, a center pixel of within the area of a

predetermined size is detected as a pixel of a graphic or photographic image area comprised of a large number of lines.

Ishida et al (US 5832141 A) discloses an image area determining unit that outputs a signal indicating that a target area is in a pseudo-half-tone area when it is determined that the target pixel is located in at least one of the following areas: an isolated pixel area, a periodic pixel area, and a high-frequency component area.

Ushida et al (US 5721793 A) discloses counting the number of pixels judged to be isolated pixels with regard to a 4x4 block of 16 pixels, and if the sum total is greater than a fixed threshold value, the block is judged to be an image based upon an error-diffusion method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Rogers whose telephone number is 571-272-7467. The examiner can normally be reached Monday through Friday 6:00am-2:00pm.

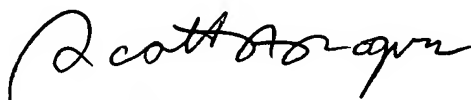
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Moore can be reached at 571-272-7437.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC2600 Customer Service at 571-272-2600. Official correspondence by facsimile should be sent to 571-273-8300. The USPTO contact Center phone numbers are 800-PTO-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through

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Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Scott Rogers", written in a cursive style.

SCOTT ROGERS
PRIMARY EXAMINER

18 March 2006